

State of West Virginia  
Department of Environmental Protection  
Office of Oil and Gas  
Well Operator's Report of Well WorkDATE: 11-19-2012  
API #: 47-069-00065Farm name: George Gantzer 6H Operator Well No.: 832740LOCATION: Elevation: 1260' Quadrangle: Valley GroveDistrict: Tridelpia County: Ohio  
Latitude: 4740' Feet South of 40 Deg. 05 Min. 00 Sec.  
Longitude 13770 Feet West of 80 Deg. 35 Min. 00 Sec.Company: Chesapeake Appalachia, L.L.C.

Address:	P.O. Box 18496	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
Oklahoma City, OK 73154-0496		20"	100'	100'	208 Cu. Ft.
Agent:	Eric Gillespie	13 3/8"	640'	640'	685 Cu. Ft.
Inspector:	Bill Hendershot	9 5/8"	2116'	2116'	926 Cu. Ft.
Date Permit Issued:	2-18-2011	5 1/2"	12758'	12758'	2672 Cu. Ft.
Date Well Work Commenced:	3-18-2012				
Date Well Work Completed:	4-30-2012				
Verbal Plugging:					
Date Permission granted on:					
Rotary <input checked="" type="checkbox"/> Cable <input type="checkbox"/> Rig <input type="checkbox"/>					
Total Vertical Depth (ft):	6496'				
Total Measured Depth (ft):	12758'				
Fresh Water Depth (ft.):	30'				
Salt Water Depth (ft.):	1135'				
Is coal being mined in area (N/Y)?	N				
Coal Depths (ft.):	575'				
Void(s) encountered (N/Y) Depth(s)	Y 575'				

## OPEN FLOW DATA (If more than two producing formations please include additional data on separate sheet)

Producing formation Marcellus Pay zone depth (ft) 6,900' - 12,601'  
Gas: Initial open flow \_\_\_\_\_ MCF/d Oil: Initial open flow \_\_\_\_\_ Bbl/d  
Final open flow 2153\* MCF/d Final open flow 85 Bbl/d  
Time of open flow between initial and final tests 96 Hours \*Calculated  
Static rock Pressure 4223\* psig (surface pressure) after \_\_\_\_\_ HoursSecond producing formation \_\_\_\_\_ Pay zone depth (ft) \_\_\_\_\_  
Gas: Initial open flow \_\_\_\_\_ MCF/d Oil: Initial open flow \_\_\_\_\_ Bbl/d  
Final open flow \_\_\_\_\_ MCF/d Final open flow \_\_\_\_\_ Bbl/d  
Time of open flow between initial and final tests \_\_\_\_\_ Hours  
Static rock Pressure \_\_\_\_\_ psig (surface pressure) after \_\_\_\_\_ Hours

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all the attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete.

Marlene Williams  
Signature11-19-2012  
DateRECEIVED  
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WV DEPARTMENT OF ENVIRONMENTAL PROTECTION

Were core samples taken? Yes \_\_\_\_\_ No N

Were cuttings caught during drilling? Yes Y No \_\_\_\_\_

Were Electrical, Mechanical or Geophysical logs recorded on this well? If yes, please list \_\_\_\_\_  
LWD GR from 5882-12758' MD.

**NOTE: IN THE AREA BELOW PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF THE TOPS AND BOTTOMS OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE FROM SURFACE TO TOTAL DEPTH.**

Perforated Intervals, Fracturing, or Stimulating:

(See Attached)

Plug Back Details Including Plug Type and Depth(s):

Formations Encountered:	Top Depth	/	Bottom Depth
Surface:			

(See Attached)

**LATERAL SIDETRACK WELLBORE (no vertical pilot hole associated with this well)**

**Maximum TVD of wellbore: 6496 ft TVD @ 12758 ft MD**

Formation/Lithology	Top Depth, MD (ft)	Top Depth, TVD (ft)	Bottom Depth, MD (ft)	Bottom Depth, TVD (ft)
LS/SS	0	0	575	575
PITTSBURG COAL	575	575	585	585
LS/SHALE	585	585	700	700
SS	700	700	1200	1200
SHALE	1200	1200	1290	1290
SS	1290	1290	1750	1750
BIG LIME (LS)	1750	1750	1800	1800
BIG INJUN (SS)	1800	1800	2011	2011
SHALE	2011	2011	6348	6196
GENESEO (SH)	6348	6196	6374	6218
TULLY (LS)	6374	6218	6421	6253
HAMILTON (SH)	6421	6253	6610	6360
MARCELLUS (SH)	6610	6360		
TD OF LATERAL			12758	6496

**Well Number and Name: 832740 George Gantzer 6H**

[illegible]

REVISED  
State of West Virginia  
Department of Environmental Protection  
Office of Oil and Gas  
Well Operator's Report of Well Work

DATE: 11-19-2012  
API #: 47-069-00090

Farm name: Charles Frye OHI 5H

Operator Well No.: 833121

LOCATION: Elevation: 1260'

Quadrangle: Valley Grove, WV

District: Triadelphia

County: Ohio

Latitude: 10350' Feet South of 40 Deg. 05 Min. 00 Sec.

Longitude 10960' Feet West of 80 Deg. 32 Min. 30 Sec.

Company: Chesapeake Appalachia, L.L.C.

Address:	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
P.O. Box 18496				
Oklahoma City, OK 73154-0496	20"	110'	110'	224 Cu. Ft.
Agent: Eric Gillespie	13 3/8"	676'	676'	767 Cu. Ft.
Inspector: Derek Haught	9 5/8"	2197'	2197'	1015 Cu. Ft.
Date Permit Issued: 7-11-2011	5 1/2"	12917'	12917'	2933 Cu. Ft.
Date Well Work Commenced: 8-17-2011				
Date Well Work Completed: 3-2-2012				
Verbal Plugging:				
Date Permission granted on:				
Rotary <input checked="" type="checkbox"/> Cable <input type="checkbox"/> Rig <input type="checkbox"/>				
Total Vertical Depth (ft): 6503'				
Total Measured Depth (ft): 12917'				
Fresh Water Depth (ft.): 78', 300'				
Salt Water Depth (ft.): 1135'				
Is coal being mined in area (N/Y)? N				
Coal Depths (ft.): 632'				
Void(s) encountered (N/Y) Depth(s) Y 632'				

OPEN FLOW DATA (If more than two producing formations please include additional data on separate sheet)

Producing formation Marcellus Pay zone depth (ft) 6,898' - 12,784'

Gas: Initial open flow MCF/d Oil: Initial open flow Bbl/d

Final open flow 1,905\* MCF/d Final open flow 155 Bbl/d

Time of open flow between initial and final tests 96 Hours \*Calculated

Static rock Pressure 4,209\* psig (surface pressure) after Hours

Second producing formation Pay zone depth (ft)

Gas: Initial open flow MCF/d Oil: Initial open flow Bbl/d

Final open flow MCF/d Final open flow Bbl/d

Time of open flow between initial and final tests Hours

Static rock Pressure psig (surface pressure) after Hours

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all the attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete.

Marlene Williams  
Signature

11-19-2012  
Date

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Were core samples taken? Yes \_\_\_\_\_ No X

Were cuttings caught during drilling? Yes X No \_\_\_\_\_

Were Electrical, Mechanical or Geophysical logs recorded on this well? If yes, please list \_\_\_\_\_

MWD GR in lateral

**NOTE: IN THE AREA BELOW PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF THE TOPS AND BOTTOMS OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE FROM SURFACE TO TOTAL DEPTH.**

Perforated Intervals, Fracturing, or Stimulating:

(See Attached)

Plug Back Details Including Plug Type and Depth(s):

<u>Formations Encountered:</u>	<u>Top Depth</u>	<u>/</u>	<u>Bottom Depth</u>
<u>Surface:</u>			

(See Attached)

**LATERAL WELLBORE****Maximum TVD of wellbore:** 6503 ft TVD @ 7101 ft MD

Formation/Lithology	Top Depth, MD (ft)	Top Depth, TVD (ft)	Bottom Depth, MD (ft)	Bottom Depth, TVD (ft)
SHALE/LS	0	0	530	530
SS/SHALE	530	530	560	560
LS/SHALE	560	560	618	618
PITTSBURGH COAL	618	618	630	630
LS/SHALE	630	630	650	650
SS/SHALE	650	650	680	680
SHALE	680	680	1090	1090
SS/SHALE	1090	1090	1620	1620
LS/SHALE	1620	1620	1650	1650
LS	1650	1650	1680	1680
LS/SS	1680	1680	1720	1720
SS	1720	1720	2000	2000
SS/SHALE	2000	2000	2020	2020
BASE OF BIG INJUN	2020	2020		0
SHALE	2020	2020	4600	4600
SHALE/SS	4600	4600	4680	4680
SHALE	4680	4680	6465	6308
GENESEO	6465	6308	6497	6332
TULLY	6497	6332	6545	6364
HAMILTON	6545	6364	6791	6476
MARCELLUS	6791	6476	12917	6452
TD	12917	6452		0
		0		0





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State of West Virginia  
Department of Environmental Protection  
Office of Oil and Gas  
Well Operator's Report of Well Work

DATE: 11-19-2012  
API #: 47-069-00101

Farm name: George Gantzer OHI 3H Operator Well No.: 834153

LOCATION: Elevation: 1260' Quadrangle: Valley Grove

District: Tridelpia County: Ohio  
Latitude: 4760' Feet South of 40 Deg. 05 Min. 00 Sec.  
Longitude 13950' Feet West of 80 Deg. 35 Min. 00 Sec.

Company: Chesapeake Appalachia, L.L.C.

Address:	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
<u>P.O. Box 18496</u>				
<u>Oklahoma City, OK 73154-0496</u>	<u>20"</u>	<u>100'</u>	<u>100'</u>	<u>353 Cu. Ft.</u>
Agent: <u>Eric Gillespie</u>	<u>13 3/8"</u>	<u>652'</u>	<u>652'</u>	<u>684 Cu. Ft.</u>
Inspector: <u>Bill Hendershot</u>	<u>9 5/8"</u>	<u>2135'</u>	<u>2135'</u>	<u>926 Cu. Ft.</u>
Date Permit Issued: <u>11-15-2011</u>	<u>5 1/2"</u>	<u>12587'</u>	<u>12587'</u>	<u>2655 Cu. Ft.</u>
Date Well Work Commenced: <u>2-1-2012</u>				
Date Well Work Completed: <u>5-1-2012</u>				
Verbal Plugging:				
Date Permission granted on:				
Rotary <input checked="" type="checkbox"/> Cable <input type="checkbox"/> Rig <input type="checkbox"/>				
Total Vertical Depth (ft): <u>6396'</u>				
Total Measured Depth (ft): <u>12587'</u>				
Fresh Water Depth (ft.): <u>30'</u>				
Salt Water Depth (ft.): <u>1135'</u>				
Is coal being mined in area (N/Y)? <u>N</u>				
Coal Depths (ft.): <u>575'</u>				
Void(s) encountered (N/Y) Depth(s) <u>Y 580'</u>				

OPEN FLOW DATA (If more than two producing formations please include additional data on separate sheet)

Producing formation Marcellus Pay zone depth (ft) 6,900' - 12,451'

Gas: Initial open flow \_\_\_\_\_ MCF/d Oil: Initial open flow \_\_\_\_\_ Bbl/d

Final open flow 1,567\* MCF/d Final open flow 101 Bbl/d

Time of open flow between initial and final tests 72 Hours \*Calculated

Static rock Pressure 4,109\* psig (surface pressure) after \_\_\_\_\_ Hours

Second producing formation \_\_\_\_\_ Pay zone depth (ft) \_\_\_\_\_

Gas: Initial open flow \_\_\_\_\_ MCF/d Oil: Initial open flow \_\_\_\_\_ Bbl/d

Final open flow \_\_\_\_\_ MCF/d Final open flow \_\_\_\_\_ Bbl/d

Time of open flow between initial and final tests \_\_\_\_\_ Hours

Static rock Pressure \_\_\_\_\_ psig (surface pressure) after \_\_\_\_\_ Hours

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all the attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete.

Marlene Williams  
Signature

11-19-2012  
Date

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ENVIRONMENTAL PROTECTION

Were core samples taken? Yes \_\_\_\_\_ No N

Were cuttings caught during drilling? Yes Y No \_\_\_\_\_

Were Electrical, Mechanical or Geophysical logs recorded on this well? If yes, please list \_\_\_\_\_  
LWD GR from 5813-12587' MD.

**NOTE: IN THE AREA BELOW PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF THE TOPS AND BOTTOMS OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE FROM SURFACE TO TOTAL DEPTH.**

Perforated Intervals, Fracturing, or Stimulating:

(See Attached)

Plug Back Details Including Plug Type and Depth(s):

Formations Encountered:	Top Depth	/	Bottom Depth
<u>Surface:</u>			

(See Attached)

**Well Number and Name: 834153 George Gantzer OHI 3H**

[illegible]

**LATERAL SIDETRACK WELLBORE (no vertical pilot hole associated with this well)****Maximum TVD of wellbore: 6396 ft TVD @ 6784 ft MD**

Formation/Lithology	Top Depth, MD (ft)	Top Depth, TVD (ft)	Bottom Depth, MD (ft)	Bottom Depth, TVD (ft)
LS/SS	0	0	575	575
PITTSBURG COAL	575	575	585	585
LS/SHALE	585	585	700	700
SS	700	700	1200	1200
SHALE	1200	1200	1290	1290
SS	1290	1290	1750	1750
BIG LIME (LS)	1750	1750	1800	1800
BIG INJUN (SS)	1800	1800	2011	2011
SHALE	2011	2011	6234	6204
GENESEO (SH)	6234	6204	6266	6227
TULLY (LS)	6266	6227	6313	6259
HAMILTON (SH)	6313	6259	6501	6357
MARCELLUS (SH)	6501	6357		
TD OF LATERAL			12587	6323

WR-35  
Rev (9-11)

State of West Virginia  
Department of Environmental Protection  
Office of Oil and Gas  
Well Operator's Report of Well Work

DATE: 11/15/12  
API #: 47-7500039 W

Farm name: U.S. Dept of the Interior Operator Well No.: 7479

LOCATION: Elevation: 3747 ft Quadrangle: Sinks of Gandy

District: Green Bank County: Pocahontas  
Latitude: 15,050 Feet South of 38 Deg. 45 Min. 00 Sec.  
Longitude 10,880 Feet West of 79 Deg. 42 Min. 30 Sec.

Company: Columbia Gas Transmission, LLC

Address:	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
1700 MacCorkle Ave SE				
Charleston, WV 25325-1273	13.625	33	33	15
Agent: Paul Amick	9.625	1401	1401	530
Inspector: Joe McCourt	7	6084	6084	267
Date Permit Issued: 5/4/12	2.375 tbg pulled			
Date Well Work Commenced: 6/1/12				
Date Well Work Completed: 11/9/12				
Verbal Plugging: NA				
Date Permission granted on:				
Rotary <input type="checkbox"/> Cable <input type="checkbox"/> Rig <input checked="" type="checkbox"/>				
Total Vertical Depth (ft):				
Total Measured Depth (ft): 6242 (when drilled in 1988)				
Fresh Water Depth (ft.): 90, 350, 740 (as rptd by driller)				
Salt Water Depth (ft.): none rptd by driller				
Is coal being mined in area (N/Y)? N				
Coal Depths (ft.): NA				
Void(s) encountered (N/Y) Depth(s) none rptd				

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OPEN FLOW DATA (If more than two producing formations please include additional data on separate sheet)

Producing formation Oriskany Pay zone depth (ft) 6185 - 6200

Gas: Initial open flow \_\_\_\_\_ MCF/d Oil: Initial open flow \_\_\_\_\_ Bbl/d

Final open flow \_\_\_\_\_ MCF/d Final open flow \_\_\_\_\_ Bbl/d

Time of open flow between initial and final tests \_\_\_\_\_ Hours

Static rock Pressure \_\_\_\_\_ psig (surface pressure) after \_\_\_\_\_ Hours

Second producing formation \_\_\_\_\_ Pay zone depth (ft) \_\_\_\_\_

Gas: Initial open flow \_\_\_\_\_ MCF/d Oil: Initial open flow \_\_\_\_\_ Bbl/d

Final open flow \_\_\_\_\_ MCF/d Final open flow \_\_\_\_\_ Bbl/d

Time of open flow between initial and final tests \_\_\_\_\_ Hours

Static rock Pressure \_\_\_\_\_ psig (surface pressure) after \_\_\_\_\_ Hours

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all the attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information I believe that the information is true, accurate, and complete.

James E. Amick  
Signature

11/15/12  
Date

Were core samples taken? Yes \_\_\_\_\_ No X

Were cuttings caught during drilling? Yes \_\_\_\_\_ No NA

Were Electrical, Mechanical or Geophysical logs recorded on this well? If yes, please list MicroVertilog (pipe inspection)

**NOTE: IN THE AREA BELOW PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF THE TOPS AND BOTTOMS OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE FROM SURFACE TO TOTAL DEPTH.**

Perforated Intervals, Fracturing, or Stimulating:

Acid Treatment: 8,736 gals HCl acid - 250 bbls fresh water - 196 MSCF nitrogen

Plug Back Details Including Plug Type and Depth(s):

<u>Formations Encountered:</u>	<u>Top Depth</u>	<u>/</u>	<u>Bottom Depth</u>
<u>Surface:</u>			

NA - existing well permitted as workover/stimulation

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**Environmental Protection**

**State of West Virginia  
Division of Environmental Protection  
Section of Oil and Gas  
Well Operator's Report of Well Work**

Farm name: DALLISON LUMBER INC. Operator Well No.: L.S. HOYT 290

LOCATION: Elevation: 1,347' Quadrangle: PINE GROVE 7.5'

District: GRANT County: WETZEL

Latitude: 12,400 Feet south of 39 Deg 37 Min 30 Sec.

Longitude: 7,775 Feet west of 80 Deg 37 Min 30 Sec.

Company Address:	HG Energy PO Box 5519 Vienna, WV 26105	Casing & Tubing	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
Inspector:	Derek Haught				
Date Permit Issued:	07/06/2012				
Date Well Work Commenced:	08/02/2012				
Date Well Work Completed:	08/22/2012				
Verbal Plugging:					
Date Permission Granted On:					
Rotary X Cable Rig		7"	1320'	1320'	345 sks
Total vertical Depth (ft):	3324'				
Total Measured Depth (ft):	3642'				
Fresh Water Depth (ft):	none	4 1/2"	3561.25'	3561.25'	200 sks
Salt Water Depth (ft):	none				
Is Coal being mined in ares (Y/N)?	No				
Coal Depths (ft): x	1148'-1156'				
Void(s) encountered (Y/N) depth(s):	NONE				


**OPEN FLOW DATA**

**\* Waterflood Producer**

This well drilled directionally 115° SE a distance of 871'.

Producing formation	Gordon	Pay zone depth (ft)	3417'-3428'
Gas: Initial open flow	* MCF/d	Oil: Initial open flow	* Bbl/d
Final open flow	* MCF/d	Final open flow	* Bbl/d
Time of open flow between initial and final tests	* Hours		
Static rock pressure	* psig (surface pressure)	after	* Hours
Second producing formation		Pay zone depth (ft)	
Gas: Initial open flow	MCF/d	Oil: Initial open flow	Bbl/d
Final open flow	MCF/d	Final open flow	Bbl/d
Time of open flow between initial and final tests	Hours		
Static rock pressure	psig (surface pressure)	after	Hours

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all the attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information I believe that the information is true, accurate, and complete.

  
Signature

10/2/12  
Date

Were core samples taken? No

Were cuttings caught during drilling? No

Were Y Electrical, N Mechanical, N or Geophysical logs recorded on this well?  
Y/N Y/N Y/N

NOTE: IN THE AREA BELOW PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF THE TOPS AND BOTTOMS OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE FROM SURFACE TO TOTAL DEPTH.

**Treatment :** Treated perfs 3417'-3428', 3431'-3434', & 3435'-3437' w/ 500 gals 15% HCL acid, 238 bbls cross linked gel, and 10,500# 20/40 sand.

**Well Log :** All depths are measured relative to KB (8' AGL ).

Shale w/ sand streaks	0	-	1148
Coal	1148	-	1156
Shale w/ sand streaks	1156	-	1636
Sand	1636	-	1674
shale	1674	-	1748
sand	1748	-	1786
shale	1786	-	1805
sand	1805	-	1878
shale	1878	-	1982
sand	1982	-	1998
shale	1998	-	2036
sand	2036	-	2077
shale	2077	-	2173
sand	2173	-	2208
shale	2208	-	2226
sand	2226	-	2270
shale	2270	-	2260
sand	2260	-	2313
shale	2313	-	2327
sand	2327	-	2352
Big Lime	2352	-	2420
Big Injun	2420	-	2680
shale	2680	-	3372
Gordon Stray	3372	-	3404
shale	3404	-	3414
Gordon	3414	-	3438
shale	3438	-	3440
sand	3440	-	3444
shale	3444	-	3642
TD	3642		

T.D. -Logger 3596 KB

T.D. -Driller 3642 KB



**State of West Virginia  
Division of Environmental Protection  
Section of Oil and Gas  
Well Operator's Report of Well Work**

Farm name: DALLISON LUMBER INC. Operator Well No.: L.S. HOYT 291

LOCATION: Elevation: 1,346' Quadrangle: PINE GROVE 7.5'

District: GRANT County: WETZEL  
Latitude: 12,365 Feet south of 39 Deg 37 Min 30 Sec.  
Longitude: 7,755 Feet west of 80 Deg 37 Min 30 Sec.

Company Address:	HG Energy PO Box 5519 Vienna, WV 26105	Casing & Tubing	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
Inspector:	Derek Haught				
Date Permit Issued:	07/06/2012				
Date Well Work Commenced:	08/09/2012				
Date Well Work Completed:	08/22/2012				
Verbal Plugging:					
Date Permission Granted On:					
Rotary X Cable	Rig	7"	1320'	1320'	345 sks
Total vertical Depth (ft):	3382'				
Total Measured Depth (ft):	3825'				
Fresh Water Depth (ft):	N/A	4 1/2"	3736'	3736'	200 sks
Salt Water Depth (ft):	N/A				
Is Coal being mined in ares (Y/N)?	No				
Coal Depths (ft): x	1148'-1156'				
Void(s) encountered (Y/N) depth(s):	NONE				

**OPEN FLOW DATA**

\* Waterflood Producer

This well drilled directionally 53° NE a distance of 1193'.

3592'-3599'

Producing formation Gordon Pay zone depth (ft) 3608'-3609'  
 Gas: Initial open flow \*          MCF/d Oil: Initial open flow \*          Bbl/d  
 Final open flow \*          MCF/d Final open flow \*          Bbl/d  
 Time of open flow between initial and final tests \*          Hours  
 Static rock pressure \*          psig (surface pressure) after \*          Hours

Second producing formation          Pay zone depth (ft)           
 Gas: Initial open flow          MCF/d Oil: Initial open flow          Bbl/d  
 Final open flow          MCF/d Final open flow          Bbl/d  
 Time of open flow between initial and final tests          Hours  
 Static rock pressure          psig (surface pressure) after          Hours

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all the attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information I believe that the information is true, accurate, and complete.

  
Signature

10/2/12  
Date

Were core samples taken? No

Were cuttings caught during drilling? No

Were Y Electrical, N Mechanical, N or Geophysical logs recorded on this well?  
Y/N Y/N Y/N

NOTE: IN THE AREA BELOW PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF THE TOPS AND BOTTOMS OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE FROM SURFACE TO TOTAL DEPTH.

**Treatment :** Treated perms 3592'-3599', 3601'-3607', & 3608'-3609' w/ 500 gals 15% HCL acid, 238 bbls cross linked gel, and 10,600# 20/40 sand.

**Well Log :** All depths are measured relative to KB (8' AGL ).

Shale w/ sand streaks	0	-	1148
Coal	1148	-	1156
Shale w/ sand streaks	1156	-	1238
Sand	1238	-	1254
shale	1254	-	1640
sand	1640	-	1665
shale	1665	-	1732
sand	1732	-	1792
shale	1792	-	1800
sand	1800	-	1850
shale	1850	-	1858
sand	1858	-	1878
shale	1878	-	1990
sand	1990	-	2002
shale	2002	-	2040
sand	2040	-	2064
shale	2064	-	2170
sand	2170	-	2193
shale	2193	-	2224
sand	2224	-	2328
shale	2328	-	2341
sand	2341	-	2352
shale	2352	-	2354
Big Lime	2354	-	2422
Big Injun	2422	-	2706
shale	2706	-	3530
Gordon Stray	3530	-	3570
shale	3570	-	3580
Gordon	3580	-	3612
shale	3612	-	3614
sand	3614	-	3619
shale	3619	-	3635
sand	3635	-	3642
shale	3642	-	3825
TD	3825		
T.D. -Logger	3759	KB	
T.D. -Driller	3825	KB	

**State of West Virginia  
Division of Environmental Protection  
Section of Oil and Gas  
Well Operator's Report of Well Work**

Farm name: DALLISON LUMBER INC. Operator Well No.: L.S. HOYT 293  
LOCATION: Elevation: 979' Quadrangle: PINE GROVE 7.5'  
District: GRANT County: WETZEL  
Latitude: 9,400 Feet south of 39 Deg 37 Min 30 Sec.  
Longitude: 6,525 Feet west of 80 Deg 37 Min 30 Sec.

Company Address:	HG Energy PO Box 5519 Vienna, WV 26105	Casing & Tubing	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
Inspector:	Derek Haught				
Date Permit Issued:	07/10/2012				
Date Well Work Commenced:	07/30/2012				
Date Well Work Completed:	08/10/2012				
Verbal Plugging:					
Date Permission Granted On:					
Rotary X Cable Rig		7"	966'	966'	250 sks
Total vertical Depth (ft):	3020'				
Total Measured Depth (ft):	3020'				
Fresh Water Depth (ft):	50'	4 1/2"	2976.35'	2976.35'	150 sks
Salt Water Depth (ft):	none				
Is Coal being mined in ares (Y/N)?	No				
Coal Depths (ft): x	700'-710'				
Void(s) encountered (Y/N) depth(s):	NONE				

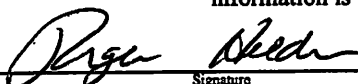
**OPEN FLOW DATA**

\* Waterflood Producer

Producing formation Gordon Pay zone depth (ft) 2865'-2875'  
Gas: Initial open flow \* MCF/d Oil: Initial open flow \* Bbl/d  
Final open flow \* MCF/d Final open flow \* Bbl/d  
Time of open flow between initial and final tests \* Hours  
Static rock pressure \* psig (surface pressure) after \* Hours

Second producing formation Pay zone depth (ft)  
Gas: Initial open flow MCF/d Oil: Initial open flow Bbl/d  
Final open flow MCF/d Final open flow Bbl/d  
Time of open flow between initial and final tests Hours  
Static rock pressure psig (surface pressure) after Hours

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all the attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information I believe that the information is true, accurate, and complete.

  
Signature

10/2/12  
Date

WV Department of Environmental Protection

Were core samples taken? No

Were cuttings caught during drilling? No

Were Y Electrical, N Mechanical, N or Geophysical logs recorded on this well?  
Y/N Y/N Y/N

NOTE: IN THE AREA BELOW PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF THE TOPS AND BOTTOMS OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE FROM SURFACE TO TOTAL DEPTH.

**Treatment :** Treated perms 2865'-2875' & 2876'-2879' w/ 500 gals 15% HCL acid, 313 bbls cross linked gel, and 20,000# 20/40 sand.

**Well Log :** All depths are measured relative to KB (8' AGL ).

Shale w/ sand streaks	0	-	700
Coal	700	-	710
Shale w/ sand streaks	710	-	1314
Sand	1314	-	1348
shale	1348	-	1402
sand	1402	-	1445
shale	1445	-	1470
sand	1470	-	1506
shale	1506	-	1512
sand	1512	-	1550
shale	1550	-	1578
sand	1578	-	1598
shale	1598	-	1773
sand	1773	-	1790
shale	1790	-	1830
sand	1830	-	1856
shale	1856	-	1874
sand	1874	-	1956
shale	1956	-	1970
sand	1970	-	1978
shale	1978	-	1980
Big Lime	1980	-	2040
Big Injun	2040	-	2266
shale	2266	-	2839
Gordon Stray	2839	-	2854
shale	2854	-	2860
Gordon	2860	-	2880
shale	2880	-	2883
sand	2883	-	2888
shale	2888	-	2891
sand	2891	-	2901
shale	2901	-	3020
TD	3020		

T.D. -Logger 2988 KB

T.D. -Driller 3020 KB

State of West Virginia  
Division of Environmental Protection  
Section of Oil and Gas  
Well Operator's Report of Well Work

Farm name: FLETCHER, FREDERICK L., ET A Operator Well No.: J.T. WILLIAMS 13

LOCATION: Elevation: 1,115' Quadrangle: WOLF SUMMIT 7.5'

District: TEN MILE County: HARRISON  
Latitude: 11,535 Feet south of 39 Deg 20 Min 0 Sec.  
Longitude: 3,045 Feet west of 80 Deg 27 Min 30 Sec.

Company Address:	HG Energy PO Box 5519 Vienna, WV 26105	Casing & Tubing	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
Inspector:	Tristan Jenkins				
Date Permit Issued:	06/21/2012				
Date Well Work Commenced:	09/05/2012				
Date Well Work Completed:	09/12/2012				
Verbal Plugging:					
Date Permission Granted On:					
Rotary X Cable	Rig	8 5/8"	404'	404'	115 sks
Total vertical Depth (ft):	2892'				
Total Measured Depth (ft):					
Fresh Water Depth (ft):	20',45'	4 1/2"	2833'	2833'	450 sks
Salt Water Depth (ft):	none				
Is Coal being mined in ares (Y/N)?	No				
Coal Depths (ft): x	540'-548'				
Void(s) encountered (Y/N) depth(s):	NONE				

OPEN FLOW DATA

\* Waterflood Injector

Producing formation Fifth Sand Pay zone depth (ft) 2770'-2776'  
Gas: Initial open flow \* MCF/d Oil: Initial open flow \* Bbl/d  
Final open flow \* MCF/d Final open flow \* Bbl/d  
Time of open flow between initial and final tests \* Hours  
Static rock pressure \* psig (surface pressure) after \* Hours

Second producing formation Pay zone depth (ft)  
Gas: Initial open flow MCF/d Oil: Initial open flow Bbl/d  
Final open flow MCF/d Final open flow Bbl/d  
Time of open flow between initial and final tests Hours  
Static rock pressure psig (surface pressure) after Hours

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all the attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information I believe that the information is true, accurate, and complete.

Bruce Helder  
Signature

10/2/12  
Date

Were core samples taken? No

Were cuttings caught during drilling? No

Were Y Electrical, N Mechanical, N or Geophysical logs recorded on this well?  
Y/N Y/N Y/N

NOTE: IN THE AREA BELOW PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF THE TOPS AND BOTTOMS OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE FROM SURFACE TO TOTAL DEPTH.

**Treatment :** Treated perfs 2770'-2776', 2778'-2780', & 2782'-2786' w/ 1000 gals 15% HCL acid, 291 bbls cross linked gel, and 7,500# 20/40 sand.

**Well Log :** See original WR35

**State of West Virginia  
Division of Environmental Protection  
Section of Oil and Gas  
Well Operator's Report of Well Work**

Farm name: HERROD, DON M. & DEBRA L. Operator Well No.: H. FLANAGAN 6

LOCATION: Elevation: 1,325' Quadrangle: WOLF SUMMIT 7.5'

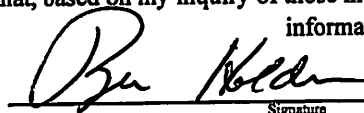
District: TEN MILE County: HARRISON  
Latitude: 8,490 Feet south of 39 Deg 20 Min 0 Sec.  
Longitude: 2,360 Feet west of 80 Deg 27 Min 30 Sec.

Company Address:	HG Energy PO Box 5519 Vienna, WV 26105	Casing & Tubing	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
Inspector:	Tristan Jenkins				
Date Permit Issued:	06/19/2012				
Date Well Work Commenced:	09/04/2012				
Date Well Work Completed:	09/12/2012				
Verbal Plugging:					
Date Permission Granted On:					
Rotary X Cable	Rig	8 5/8"	659'	659'	210 sks
Total vertical Depth (ft):	3,018'				
Total Measured Depth (ft):					
Fresh Water Depth (ft):	none	4 1/2"	2962'	2962'	385 sks
Salt Water Depth (ft):	none				
Is Coal being mined in ares (Y/N)?	No				
Coal Depths (ft): x	552'-560'				
Void(s) encountered (Y/N) depth(s):	NONE				

**OPEN FLOW DATA \* Waterflood Injector**

Producing formation	Fifth Sand	Pay zone depth (ft)	2912'-2914'
Gas: Initial open flow	* MCF/d	Oil: Initial open flow	* Bbl/d
Final open flow	* MCF/d	Final open flow	* Bbl/d
Time of open flow between initial and final tests		* Hours	
Static rock pressure	* psig (surface pressure)	after	* Hours
Second producing formation		Pay zone depth (ft)	2922'-2924'
Gas: Initial open flow	MCF/d	Oil: Initial open flow	Bbl/d
Final open flow	MCF/d	Final open flow	Bbl/d
Time of open flow between initial and final tests		Hours	
Static rock pressure	psig (surface pressure)	after	Hours

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all the attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information I believe that the information is true, accurate, and complete.

  
Signature

  
Date

Were core samples taken? No

Were cuttings caught during drilling? No

Were Y Electrical, N Mechanical, N or Geophysical logs recorded on this well?  
Y/N Y/N Y/N

NOTE: IN THE AREA BELOW PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF THE TOPS AND BOTTOMS OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE FROM SURFACE TO TOTAL DEPTH.

**Treatment :** Treated perms 2912'-2914', 2918'-2920', 2922'-2924' w/ 1000 gals 15% HCL acid, 291 bbls cross linked gel, and 20,000# 20/40 sand.

**Well Log :** See original WR35



WR-35  
Rev (9-11)

State of West Virginia  
Department of Environmental Protection  
Office of Oil and Gas  
Well Operator's Report of Well Work

DATE: 11/19/2012  
API #: 47-033-05549-D  
\*UPDATED

Farm name: Williams, Edgar - Estate Operator Well No.: Williams Unit 1H

LOCATION: Elevation: 1191' Quadrangle: Wolf Summit

District: Coal County: Harrison  
Latitude: 8728' Feet South of 39 Deg. 20 Min. 00 Sec.  
Longitude: 9173' Feet West of 80 Deg. 22 Min. 30 Sec.

Company: Antero Resources Appalachian Corp.

Address: 1625 17th Street	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
Denver, CO 80202	20" 94#	40'	40'	38 Cu. Ft. Class A
Agent: CT Corporation System	13-3/8" 55#	476'	476'	661 Cu. Ft. Class A
Inspector: Tristan Jenkins	9-5/8" 36#	2620'	2620'	1067 Cu. Ft. Class A
Date Permit Issued: 5/24/2011	5-1/2" 20#	17,129'	17,129'	4275 Cu. Ft. Class H
Date Well Work Commenced: 6/4/2011		Depth-Top	Bottom	
Date Well Work Completed: 8/5/2012	Cement Plug	5873'	6073'	150 Cu. Ft. Class A
Verbal Plugging: N/A				
Date Permission granted on: N/A				
Rotary <input checked="" type="checkbox"/> Cable <input type="checkbox"/> Rig <input type="checkbox"/>	2-3/8" 4.6#	7117'		
Total Vertical Depth (ft): 7049' TVD (deepest point drilled)				
Total Measured Depth (ft): 17,129' MD, 7049' TVD (BHL)				
Fresh Water Depth (ft.): 153'				
Salt Water Depth (ft.): 1030'				
Is coal being mined in area (N/Y)? N				
Coal Depths (ft.): Deepest known coal seam mined at surface				
Void(s) encountered (N/Y) Depth(s) N, N/A				

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WV Department of  
Environmental Protection

OPEN FLOW DATA (If more than two producing formations please include additional data on separate sheet)

Producing formation Marcellus Pay zone depth (ft) 6972' TVD (Top)

Gas: Initial open flow \_\_\_\_\_ MCF/d Oil: Initial open flow N/A Bbl/d

Final open flow 8,881 MCF/d Final open flow N/A Bbl/d

Time of open flow between initial and final tests N/A Hours

Static rock Pressure 3300 psig (surface pressure) after \_\_\_\_\_ Hours

Second producing formation \_\_\_\_\_ Pay zone depth (ft) \_\_\_\_\_

Gas: Initial open flow \_\_\_\_\_ MCF/d Oil: Initial open flow \_\_\_\_\_ Bbl/d

Final open flow \_\_\_\_\_ MCF/d Final open flow \_\_\_\_\_ Bbl/d

Time of open flow between initial and final tests \_\_\_\_\_ Hours

Static rock Pressure \_\_\_\_\_ psig (surface pressure) after \_\_\_\_\_ Hours

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all the attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information I believe that the information is true, accurate, and complete.

Rosa Portinelli  
Signature

11/19/12  
Date

Were core samples taken? Yes \_\_\_\_\_ No ☒

Were cuttings caught during drilling? Yes \_\_\_\_\_ No ☒

Were Electrical, Mechanical or Geophysical logs recorded on this well? If yes, please list Yes, CBL.

This is a subsequent well. Antero only runs wireline logs on the first well on a multi-pad (Southern Unit 2H API# 47-033-05363). Please reference wireline logs submitted with Form WR-35 for Southern Unit 2H.

**NOTE: IN THE AREA BELOW PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF THE TOPS AND BOTTOMS OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE FROM SURFACE TO TOTAL DEPTH.**

Perforated Intervals, Fracturing, or Stimulating:

Perforations: 7127' – 16,798' MD (1884 holes)

Frac'd w/ 14,008 gals 15% HCL Acid, 206,991 bbls Slick Water carrying 1,114,000# 100 mesh, 4,132,200# 40/70 and 2,565,500# 20/40 sand.

Plug Back Details Including Plug Type and Depth(s):

Formations Encountered:	Top Depth	/	Bottom Depth
Surface:			
Big Lime	1,402'		1,494'
Big Injun	1,495'		1,907'
Gantz Sand	1,908'		1,964'
Fifty Foot Sand	1,965'		2,162'
Gordon	2,163'		2,402'
Fifth Sandstone	2,403'		2,471'
Bayard	2,472'		3,134'
Speechley	3,135'		3,309'
Balltown	3,310'		3,832'
Bradford	3,833'		4,419'
Benson	4,420'		4,809'
Alexander	4,810'		5,004'
Elk	5,005'		5,589'
Rhinestreet	5,590'		6,278'
Sycamore SS	6,279'		6,731'
Burkett	6,732'		6,756'
Tully	6,757'		6,884'
Hamilton	6,885'		6,971'
Marcellus	6,972'		7,049' TVD

REVISED  
State of West Virginia  
Department of Environmental Protection  
Office of Oil and Gas  
Well Operator's Report of Well Work

DATE: 11-19-2012  
API #: 47-069-00062

Farm name: George Gantzer 10H Operator Well No.: 832660

LOCATION: Elevation: 1260' Quadrangle: Valley Grove

District: Tridelpia County: Ohio  
Latitude: 4760' Feet South of 40 Deg. 05 Min. 00 Sec.  
Longitude 13930' Feet West of 80 Deg. 35 Min. 00 Sec.

Company: Chesapeake Appalachia, L.L.C.

Address: P.O. Box 18496	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
Oklahoma City, OK 73154-0496	20"	100'	100'	354 Cu. Ft.
Agent: Eric Gillespie	13 3/8"	647'	647'	679 Cu. Ft.
Inspector: Bill Hendershot	9 5/8"	2120'	2120'	926 Cu. Ft.
Date Permit Issued: 10-26-2010	5 1/2"	11991'	11991'	2616 Cu. Ft.
Date Well Work Commenced: 2-24-2012				
Date Well Work Completed: 5-9-2012				
Verbal Plugging:				
Date Permission granted on:				
Rotary <input checked="" type="checkbox"/> Cable <input type="checkbox"/> Rig <input type="checkbox"/>				
Total Vertical Depth (ft): 6501'				
Total Measured Depth (ft): 11991'				
Fresh Water Depth (ft.): 30'				
Salt Water Depth (ft.): 1135'				
Is coal being mined in area (N/Y)? N				
Coal Depths (ft.): 575'				
Void(s) encountered (N/Y) Depth(s) Y 580'				

OPEN FLOW DATA (If more than two producing formations please include additional data on separate sheet)

Producing formation Marcellus Pay zone depth (ft) 6,650' - 11,876'

Gas: Initial open flow \_\_\_\_\_ MCF/d Oil: Initial open flow \_\_\_\_\_ Bbl/d

Final open flow 1380\* MCF/d Final open flow 83 Bbl/d

Time of open flow between initial and final tests 96 Hours \*Calculated

Static rock Pressure 4220\* psig (surface pressure) after \_\_\_\_\_ Hours

Second producing formation \_\_\_\_\_ Pay zone depth (ft) \_\_\_\_\_

Gas: Initial open flow \_\_\_\_\_ MCF/d Oil: Initial open flow \_\_\_\_\_ Bbl/d

Final open flow \_\_\_\_\_ MCF/d Final open flow \_\_\_\_\_ Bbl/d

Time of open flow between initial and final tests \_\_\_\_\_ Hours

Static rock Pressure \_\_\_\_\_ psig (surface pressure) after \_\_\_\_\_ Hours

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all the attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information I believe that the information is true, accurate, and complete.

Marlene Williams  
Signature

11-19-2012  
Date

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ENVIRONMENTAL PROTECTION

Were core samples taken? Yes \_\_\_\_\_ No N

Were cuttings caught during drilling? Yes Y No \_\_\_\_\_

Were Electrical, Mechanical or Geophysical logs recorded on this well? If yes, please list \_\_\_\_\_

LWD GR from 5958-11991' MD.

**NOTE: IN THE AREA BELOW PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF THE TOPS AND BOTTOMS OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE FROM SURFACE TO TOTAL DEPTH.**

Perforated Intervals, Fracturing, or Stimulating:

(See Attached)

Plug Back Details Including Plug Type and Depth(s):

Formations Encountered:	Top Depth	/	Bottom Depth
Surface:			

(See Attached)

**LATERAL SIDETRACK WELLBORE (no vertical pilot hole associated with this well)****Maximum TVD of wellbore: 6501 ft TVD @ 11434 ft MD**

Formation/Lithology	Top Depth, MD (ft)	Top Depth, TVD (ft)	Bottom Depth, MD (ft)	Bottom Depth, TVD (ft)
LS/SS	0	0	575	575
PITTSBURG COAL	575	575	585	585
LS/SHALE	585	585	700	700
SS	700	700	1200	1200
SHALE	1200	1200	1290	1290
SS	1290	1290	1750	1750
BIG LIME (LS)	1750	1750	1800	1800
BIG INJUN (SS)	1800	1800	2011	2011
SHALE	2011	2011	6384	6216
GENESEO (SH)	6384	6216	6414	6239
TULLY (LS)	6414	6239	6463	6274
HAMILTON (SH)	6463	6274	6651	6377
MARCELLUS (SH)	6651	6377		
TD OF LATERAL			6493	11991

**Well Number and Name: 832660 George Gantzer 10H**

[illegible]